AMENDMENTS TO THE CLAIMS

The claims in this listing will replace all prior versions, and listings, of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) A method for use in a radio communication system comprising a first transceiver, a second transceiver and a repeater, the method comprising:

upon receiving data from one of either the first or second transceivers, transmitting, by the repeater, a repeat flag to cause the transceivers to suspend further action, then

transmitting, by the repeater, the data received from the one of either the first or second transceivers, and then

transmitting, by the repeater, an overall acknowledge status to inform all transceivers in the system of the success or failure of receipt of the data transmitted by the repeater ~~cause the transceivers to resume further action~~.

2. (Previously Presented) A method according to claim 1, wherein the first and second transceivers transmit an acknowledgement indicating the successful or unsuccessful receipt of the data transmitted by the repeater.

3. (Currently Amended) A method according to claim 2, wherein the overall acknowledge status is transmitted after receipt of the acknowledgements from each of the first and second transceivers, and the overall status is based upon the received acknowledgements.

4. (Currently Amended) A method for transmitting and receiving data according to a frame for use in a network of devices comprising a first transceiver, a repeater, and at least one other transceiver, the method comprising:

transmitting, by the first transceiver, data for each of the at least one other transceivers in a first time slot of the frame;

transmitting, by the repeater, a repeat flag in a second time slot of the frame after the first time slot;

retransmitting, by the repeater, the data transmitted in the first time slot in a third time slot of the frame, after the second time slot; and

transmitting, by the repeater, an overall acknowledge status to the network in a last time slot after the third time slot to inform all transceivers in the network of the success or failure of receipt of the retransmitted data.

5. (Previously Presented) A method according to claim 4, further comprising transmitting, by each of the at least one other transceivers, in a fourth time slot of the frame, after the third time slot and before the last time slot, an acknowledgement of a successful or unsuccessful receipt of the data.

6. (Previously Presented) A method according to claim 5, wherein the fourth time slot of the frame is divided into a first sub-time slot for indicating a positive acknowledgement, and a second sub-time slot for indicating a negative acknowledge.

7. (Previously Presented) A method according to claim 6, in which the first and third time slots of the frame are variable in length and the first and second sub-time slots are fixed in length.

8. (Previously Presented) A method according to claim 6, wherein the positive acknowledge comprises the transmission of a specific coded value containing sufficient redundancy to allow it to be recovered in the presence of received errors, and the negative acknowledge comprises the transmission of a specific coded value containing sufficient redundancy to allow it to be recovered in the presence of received errors.

9. (Currently Amended) A method according to claim 7, wherein the last time slot for transmitting an overall acknowledge status to the network is a fifth time slot after the fourth time slot, and the overall acknowledge status is based upon the acknowledgements received in the fourth time slot.

10. (Currently Amended) A radio communication system comprising a first transceiver, a second transceiver and a repeater, wherein upon receiving data from one of either the first or second transceivers, in a first time slot, the repeater transmits a repeat flag in a second time slot to cause the transceivers to suspend further action, then in a third time slot transmits the data received in the first time slot, and transmits an overall acknowledge status to all transceivers in a last time slot after the third time slot to inform all transceivers in the system of the success or failure of receipt of the data transmitted by the repeater ~~cause the transceivers to resume further action~~.

11. (Previously Presented) A radio communication system according to claim 10, wherein the first and second transceivers transmit, in a fourth time slot before the last time slot, an acknowledgement indicating the successful or unsuccessful receipt of the data transmitted in the third time slot.

12. (Previously Presented) A radio communication system according to claim 11, wherein the first and second transceivers transmit a positive acknowledge in a first of two sub-time slots of the fourth time slot or transmit a negative acknowledge in a second of two sub-time slots of the fourth time slot.

13. (Currently Amended) A radio communication system according to claim 11, wherein the last time slot is a fifth time slot after the fourth time slot, and the overall acknowledge status is based upon the acknowledgements received in the fourth time slot.

14. (Currently Amended) A repeater for use in a radio communication system comprising at least two transceivers, wherein upon receiving data in a first time slot, the repeater transmits a repeat flag in a second time slot to cause the transceivers to suspend further action, then transmits in a third time slot, data received in the first time slot, and then transmits in a last time slot, after the third time slot, an overall acknowledge status to inform each of the transceivers of the success or failure of receipt of the data transmitted by the repeater ~~cause the transceivers to resume further action~~.

15. (Previously Presented) A repeater according to claim 14, wherein upon receiving acknowledgement data from the at least two transceivers in a fourth time slot, the repeater transmits an overall acknowledge status as the overall status in a fifth time slot.

16. (Currently Amended) A transceiver for use in a radio communication system comprising at least one other transceiver and a repeater, wherein upon receiving a repeat flag from the repeater, in a second time slot, the transceiver suspends further action until it receives from the repeater, in a third time slot, data that was originally transmitted by the at least one other transceiver in a first time slot, before the second time slot, and an overall acknowledge status from the repeater in a last time slot, after the third time slot, after which the transceiver resumes normal action,

wherein the overall acknowledge status informs each of the transceivers of the success or failure of receipt of the data from the repeater.

17. (Previously Presented) A transceiver according to claim 16, wherein in a fourth time slot after the third time slot and before the last time slot, the transceiver transmits an acknowledgement indicating the successful or unsuccessful receipt of the data transmitted in the third time slot.

18. (Previously Presented) A transceiver according to claim 17, wherein the transceiver transmits a positive acknowledge in a first of two sub-time slots of the fourth time slot, or transmits a negative acknowledge in a second of two sub-time slots of the fourth time slot.

19. (Previously Presented) A method for use in a radio communications system comprising at least a first transceiver, a second transceiver and a repeater, such that upon receipt of a data transmission from the first transceiver, the repeater re-transmits the data transmission from the first transceiver, wherein upon receipt of a data transmission from the second transceiver before the repeater completely receives or retransmits the data transmission from the first transceiver, the repeater transmits a data sequence instructing each transceiver to cease its respective transmission.

20. (Previously Presented) A method according to claim 19, wherein the respective transmissions of the first and second transceivers are headed by a sequence of consecutive dominant bits.

21. (Previously Presented) A method according to claim 20, wherein the data sequence transmitted by the repeater begins with a sequence of dominant bits.

22. (Previously Presented) A method according to claim 21, the method further comprising, upon receiving the data sequence from the repeater, causing each transceiver to cease transmitting, each transceiver will delay for a period before attempting to repeat its original transmission.

23. (Previously Presented) A method according to claim 21, wherein the delay period is calculated by each transceiver by selecting a random number and scaling the random number according to the number of bits in its respective transmission.

24. (Previously Presented) A method according to claim 23, wherein if subsequent transmission retries still collide, subsequently calculated delay periods are increased.

25. (Previously Presented) A method according to claim 24, wherein after a predetermined number of unsuccessful retries, the transceiver ceases further transmission attempts.

26. (Previously Presented) A method according to claim 25, wherein after ceasing further transmission attempts, the network alerts an operator that further transmission attempts have ceased.

27. (Previously Presented) A radio communications system comprising at least a first transceiver, a second transceiver and a repeater, such that upon receipt of a data transmission from the first transceiver, the repeater re-transmits the data transmission from the first transceiver, wherein upon receipt of a data transmission from the second

transceiver before the repeater completely receives or re-transmits the data transmission from the first transceiver, the repeater transmits a data sequence instructing each transceiver to cease its respective transmission.

28. (Previously Presented) A radio communications system according to claim 27, wherein respective transmissions of the first and second transceivers are headed by a sequence of consecutive dominant bits.

29. (Previously Presented) A radio communication system according to claim 28, wherein the data sequence transmitted by the repeater begins with a sequence of dominant bits.

30. (Previously Presented) A radio communications system according to claim 29, wherein upon receiving the data sequence from the repeater causing each transceiver to cease transmitting, each transceiver delays for a period before attempting to repeat its original transmission.

31. (Previously Presented) A radio communications system according to claim 30, wherein the delay period is calculated by each transceiver by selecting a random number and scaling the random number according to the number of bits in its respective transmission.

32. (Previously Presented) A radio communications system according to claim 31, wherein if subsequent transmission retries still collide, subsequently calculated delay periods are increased.

33. (Previously Presented) A radio communications system according to claim 32, wherein after a pre-determined number of unsuccessful retries, the transceiver ceases further transmission attempts.

34. (Previously Presented) A radio communications system according to claim 33, wherein upon further transmission attempts ceasing, the radio communication system alerts an operator to the fact that further transmission attempts have ceased.

35. (Previously Presented) A repeater for use in a radio communication system comprising at least a first transceiver and a second transceiver such that upon receipt of a data transmission from the first transceiver, the repeater retransmits the data transmission from the first transceiver, wherein upon receipt of a data transmission from the second transceiver before the repeater completely receives or re-transmits the data transmission from the first transceiver, the repeater transmits a data sequence instructing each transceiver to cease its respective transmission.

36. (Previously Presented) A repeater according to claim 35, wherein the data sequence transmitted by the repeater is a sequence of dominant bits.

37. (Previously Presented) A transceiver for use in a radio communication system comprising at least one other transceiver and a repeater, such that upon receipt of a data transmission from the at least one other transceiver, the repeater re-transmits the data transmission from the at least one other transmitter and upon receipt of the data transmission from the transceiver before retransmitting the data transmission from the at least one other transceiver, the repeater transmits a data sequence instructing each transceiver to cease respective transmissions, wherein, upon receipt of the data sequence from the repeater, the transceiver will cease transmission.

38. (Previously Presented) A transceiver according to claim 37, wherein the transmission from the transceiver is headed by a sequence of consecutive dominant bits.

39. (Previously Presented) A transceiver according to claim 38, wherein upon receiving the data sequence from the repeater, the transceiver delays for a period before attempting to repeat its original transmission.

40. (Previously Presented) A transceiver according to claim 39, wherein the delay period is calculated by the transceiver by selecting a random number and scaling the random number according to the number of bits in its transmission.

41. (Previously Presented) A transceiver according to claim 40, wherein if subsequent re-transmissions still result in receipt of a data sequence from the repeater, the transceiver will increase subsequent delay periods before re-transmitting its original transmission.

42. (Previously Presented) A transceiver according to claim 41, wherein after a pre-determined number of unsuccessful re-transmission attempts, the transceiver will cease further transmission attempts.

43. (Previously Presented) A transceiver according to claim 42, wherein upon ceasing further transmission attempts, the transceiver will alert an operator to the fact that further transmission attempts have ceased.